SPECIFICATION AMENDMENTS

Please amend the paragraph beginning on page 2, line 3 as follows:

The size of tissue coagulation created from a single electrode, and to a lesser extent a multiple electrode array, has been limited by heat dispersion. As a result, multiple probe insertions must typically be performed in order to ablate the entire tumor. This process considerably increases treatment duration and ~~patent~~ patient discomfort and, due in large part to the limited echogenicity of the ablation probe when viewed under ultrasonography, requires significant skill for meticulous precision of probe placement. In response to this, the marketplace has attempted to create larger lesions with a single probe insertion. Increasing generator output, however, has been generally unsuccessful for increasing lesion diameter, because an increased wattage is associated with a local increase of temperature to more than 100°C, which induces tissue vaporization and charring. This then increases local tissue impedance, limiting RF deposition, and therefore heat diffusion and associated coagulation necrosis.

Please amend the paragraph beginning on page 3, line 16 as follows:

In accordance with the present inventions, an ablation probe is provided. The ablation probe comprises an elongated shaft, which in the preferred embodiment, is rigid, so that it can be percutaneously or laparoscopically introduced into a patient's body. Alternatively, the probe shaft can be flexible, e.g., if the ablation probe takes the form of an intravascular or extravascular catheter. The ablation probe further comprises an ablative element. Although many types of ablative elements may be contemplated by the present invention, the ablative element preferably takes the form of electrode(s), e.g., a single needle electrode or an array of electrodes. The ablation probe

further comprises a lumen that extends through the probe shaft, which will be used to deliver ~~an~~ a fluid to the distal end of the probe shaft for perfusion into the surrounding tissue.

Please amend the paragraph beginning on page 4, line 5 as follows:

The ablation probe further comprises a porous structure that is associated with the distal end of the shaft in fluid communication with the lumen. For example, the distal end of the shaft, or the entirety of the shaft, can be composed of the porous structure. Or, if the ablative element is an electrode, the electrode can be composed of the porous structure. In this case, the porous structure is preferably composed of an electrically conductive material, such as stainless steel, so that it is capable of conveying radio frequency (RF) energy. In this manner, ~~an~~ a fluid can be conveyed through the lumen, and out through the porous structure into adjacent tissue during the ablation process. In the case where the ablative element is a single needle electrode, the needle electrode can be close ended, since perfusion of the fluid will occur through the porous structure. In general, a close ended needle electrode can penetrate through tissue more accurately. Because the pores within the porous structure are pervasive, the fluid will freely flow out into the tissue notwithstanding that some of the pores may become clogged. The porous structure may be macroporous or microporous, but in one preferred embodiment, the effective diameter of the pores will fall within the range of 1-50 microns.

Please amend the paragraph beginning on page 5, line 13 as follows:

In accordance with a fourth aspect of the present invention, a tissue ablation system is provided. The system comprises an ablation probe, which may be, e.g., a surgical probe. The ablation probe comprises an ablative element (e.g., such as those previously described) and a perfusion lumen. At least a portion of the ablation probe is composed of a porous structure that is in

fluid communication with the perfusion lumen. The porous structure can have the same structure and function as the previously described porous structures. The system further comprises an ablation source operably coupled to the ablative element. If the ablative element is in electrode, the ablation source can be a RF generator. The system further comprises ~~an~~ a fluid source operably coupled to the perfusion lumen. The system may optionally comprise a pump assembly for pumping the fluid from the source through the perfusion lumen of the ablation probe.

Please amend the paragraph beginning on page 9, line 1 as follows:

Referring further to **Fig. 3**, the ablation probe 110 generally comprises a shaft 120 having a proximal end 122 and a distal end 124, a single tissue penetrating needle electrode 126 formed at the end of the distal shaft end 124, and a lumen 128 (shown in phantom) longitudinally extending through the length of the shaft 120. The shaft 120 comprises a wall 130 that is preferably composed of an electrically conductive material, such as stainless steel, nickel-titanium alloy, nickel-chromium alloy, spring steel alloy, and the like. As will be described in further detail below, the shaft wall 130 is composed of porous structure 132, as well as the needle electrode 126, (shown in **Fig. 6**) that facilitates the introduction of ~~an~~ a fluid into the tissue during the ablation process.

Please amend the paragraph beginning on page 15, line 9 as follows:

Other types of pump assemblies are also available for pumping fluid through the probe shaft 120. For example, a saline bag can simply be connected to the fluid inlet port 140 on the connector assembly 136 via tubing, and then raised above the patient a sufficient height to provide the head pressure necessary to convey the fluid through the shaft 120 and out of the needle electrode 126. Alternatively, pumps can be conveniently incorporated within the connector assembly 136~~, as more~~

~~fully described in copending U.S. patent application Ser. No. 10/xxx,xxx (Bingham Docket No. 2024728-7034802001), which is expressly incorporated herein by reference~~.

Please amend the paragraph beginning on page 16, line 15 as follows:

The inner probe 210 comprises a reciprocating shaft 220 having a proximal end 222 and a distal end 224 (shown in **Fig. 8**); a perfusion lumen (not shown) extending through the shaft 220 between the proximal end 222 and distal end 224; a cylindrical interface 228 mounted to the distal end 224 of the shaft 220; and an array 230 of tissue penetrating needle electrodes 232 mounted within the cylindrical interface 228. The shaft 220 is slidably disposed within the perfusion lumen of the cannula 208, such that longitudinal translation of the shaft 220 in a distal direction 234 deploys the electrode array ~~226~~ 230 from the distal end 214 of the cannula 208 (**Fig. 8**), and longitudinal translation of the shaft 218 in a proximal direction 236 retracts the electrode array ~~226~~ 230 into the distal end 214 of the cannula 108 (**Fig. 7**).